

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-28. (Canceled).

29. (currently amended): A medical catheter for the transvascular deployment of a medical device, the medical catheter comprising:

an elongate catheter tubular body having a proximal end and a distal end;

a tubular medical device embracing pod located at the distal end of the catheter tubular body for reception of the medical device, the pod being integrally formed with the catheter tubular body and including a thin-walled distal portion of the catheter tubular body of reduced wall thickness relative to a proximal portion of the catheter tubular body, and the pod having a greater flexibility than the proximal portion of the catheter tubular body;

a deployer within the pod and attachable to the medical device and movable in a proximal to distal direction through the pod to move the medical device between a stored position within the pod and an in-use position externally of the pod; and

the deployer is movable to reveal the medical device,

wherein the medical device is an embolic protection filter.

30. (Previously presented): A catheter as claimed in claim 29 wherein the catheter tubular body is of a polymeric material.

31. (Previously presented): A catheter as claimed in claim 29 wherein at least a portion of the catheter tubular body tapers distally at a location adjacent and proximal the pod.

32. (Previously presented): A catheter as claimed in claim 29 wherein an outer

diameter of the catheter tubular body is substantially constant from the proximal portion to the distal portion.

33. (Previously presented): A catheter as claimed in claim 29 wherein the pod has sufficient axial rigidity to allow retraction of the medical device directly into the pod.

34. (Previously presented): A catheter as claimed in claim 29 wherein the wall thickness of the thin-walled pod is less than or equal to 0.004 inches (0.1 mm).

35. (currently amended): A delivery system for transvascular deployment of a medical device, the system comprising:

a catheter comprising:

an elongate catheter tubular body having a proximal end and a distal end,

a tubular medical device embracing pod located at the distal end of the catheter tubular body for reception of the medical device, the pod being integrally formed with the catheter tubular body and including a thin-walled distal portion of the catheter tubular body of reduced wall thickness relative to a proximal portion of the catheter tubular body, and the pod having a greater flexibility than the proximal portion of the catheter tubular body, and

a deployer within the pod and attachable to the medical device and movable in a proximal to distal direction through the pod to move the medical device between a stored position within the pod and an in-use position externally of the pod, where the deployer is movable to reveal the medical device; and

an associated separate loading device which is operable to collapse the medical device from an expanded in-use position to a collapsed position for reception within the pod,

wherein the medical device is an embolic protection device.

36. (Previously presented): A system as claimed in claim 35 wherein the loading

device is configured to radially compress the medical device.

37. (Previously presented): A system as claimed in claim 35 wherein the loading device comprises a funnel having an enlarged inlet end and a narrowed outlet end, the outlet end being engagable within the pod.

38. (Previously presented): A system as claimed in claim 37 wherein the loading device comprises a main support having a funnel-shaped bore formed from a frusto-conical medical device receiving portion terminating in a cylindrical portion formed by a thin-walled loading tube projecting from the main support.

39. (Previously presented): A system as claimed in claim 38 in which a cone angle of the bore is between 15° and 65°.

40. (Previously presented): A system as claimed in claim 39 in which the cone angle is between 35° and 45°.

41. (Previously presented): A system as claimed in claim 38 in which the main support is formed from Perspex and the thin-walled loading tube from polytetrafluoroethylene.

42. (Previously presented): A system as claimed in claim 38 in which the loading tube is mounted on the main support on a metal spigot at an outer end of the funnel.

43. (Withdrawn): A medical catheter pack for a delivery system, the pack comprising:
a delivery system comprising:

a catheter comprising:

an elongate catheter tubular body having a proximal end and a distal end,

a tubular medical device embracing pod located at the distal end of the catheter tubular body for reception of the medical device, the pod being integrally formed with the catheter tubular body and including a thin-walled distal portion of the catheter tubular body of

reduced wall thickness relative to a proximal portion of the catheter tubular body, and the pod having a greater flexibility than the proximal portion of the catheter tubular body, and

a deployer movable through the pod to move the medical device between a stored position within the pod and an in-use position externally of the pod;

an associated separate loading device which is operable to collapse the medical device from an expanded in-use position to a collapsed position for reception within the pod; and

a tray configured to releasably hold the pod of the catheter relative to the associated separate loading device in a cooperative juxtaposition on the tray.

44. (Withdrawn): A pack as claimed in claim 43 wherein the tray has a liquid retaining bath formed by a recess in the tray, the bath having a depth sufficient to accommodate in a totally submerged state the pod of the catheter and the medical device for submerged loading of the medical device into the pod.

45. (Withdrawn): A pack as claimed in claim 44 wherein the tray has a catheter holding channel communicating with the bath, the channel defining a pathway around the tray which supports the catheter in a loading position on the tray.

46. (Withdrawn): A pack as claimed in claim 45 wherein the catheter is held within the channel by a number of retainers spaced apart along the channel, each retainer comprising two or more associated projections which project inwardly from opposite side walls of the channel adjacent a mouth of the channel, the projections being resiliently deformable for snap engagement of the catheter within the channel behind the projections.

47. (Withdrawn): A pack as claimed in claim 45 wherein a ramp is provided at an end of the channel communicating with the bath to direct the pod of the catheter towards a bottom of the bath.

48. (Withdrawn): A pack as claimed in claim 47 including a step adjacent the channel configured to support the pod of the catheter above the bottom of the bath.

49. (Withdrawn): A pack as claimed in claim 44 wherein a recess provided within the bath supports the catheter loading device for engagement with the pod of the catheter to guide the medical device into the pod of the catheter.

50. (Withdrawn): A pack as claimed in claim 49 wherein said recess is located in a side wall of the bath for reception of a funnel with an outlet pipe of the funnel directed towards the channel for engagement with the pod of the catheter.

51. (Withdrawn): A method for preparing a medical catheter for the transvascular deployment of a medical device, the method comprising the steps of:

providing a medical catheter comprising:

an elongate tubular body having a proximal end and a distal end,

a tubular medical device embracing pod located at the distal end of the catheter tubular body for reception of the medical device, the pod being integrally formed with the catheter tubular body and including a thin-walled distal portion of the catheter tubular body of reduced wall thickness relative to a proximal portion of the catheter tubular body, and the pod having a greater flexibility than the proximal portion of the catheter tubular body, and

a deployer movable through the pod to move the medical device between a stored position within the pod and an in-use position externally of the pod;

providing a loading device for collapsing the medical device from an expanded in-use position to a collapsed position for reception within the pod, the loading device having an inlet end and an outlet end;

engaging the outlet end of the loading device within the pod;

engaging the medical device with the deployer;

retracting the deployer proximally through the catheter tubular body, to draw the medical device through the loading device into the pod, thereby collapsing the medical device;
and

disengaging the loading device from the pod.

52. (Withdrawn): A method for deploying a medical device at a desired location in a vasculature, the method comprising:

providing a medical catheter comprising:

an elongate tubular body having a proximal end and a distal end, and

a tubular medical device embracing pod located at the distal end of the catheter tubular body for reception of the medical device, the pod being integrally formed with the catheter tubular body and including a thin-walled distal portion of the catheter tubular body of reduced wall thickness relative to a proximal portion of the catheter tubular body, and the pod having a greater flexibility than the proximal portion of the catheter tubular body;

loading the medical device into the pod of the medical catheter;

inserting the medical catheter into a vasculature and advancing the medical catheter through the vasculature until the pod is in a desired location; and

deploying the medical device from the pod at the desired location.

53. (Withdrawn): A method as claimed in claim 52 wherein the loading of the medical device into the pod includes engaging the medical device with a deployer and retracting the deployer proximally to draw the medical device into a loading device coupled to the pod.

54. (Withdrawn): A method as claimed in claim 53 wherein the loading device

collapses the medical device from an expanded in use position to a collapsed position for reception within the pod.

55. (Withdrawn): A method as claimed in claim 54 wherein the loading device comprises a funnel having an enlarged inlet end and a narrowed outlet end, the outlet end being engagable within the pod.

56. (Withdrawn): A method as claimed in claim 52 wherein the medical device is deployed by moving the catheter tubular body proximally relative to the deployer.

57. (Withdrawn): A method as claimed in claim 52 including withdrawing the catheter tubular body from the vasculature after deploying of the medical device.

58. (Withdrawn): A method as claimed in claim 52 wherein the medical device is a filter device.

59. (new): A medical catheter for the transvascular deployment of a medical device, the medical catheter comprising:

an elongate catheter tubular body having a proximal end and a distal end;

a tubular medical device embracing pod located at the distal end of the catheter tubular body for reception of the medical device, the pod being integrally formed with the catheter tubular body and including a thin-walled distal portion of the catheter tubular body of reduced wall thickness relative to a proximal portion of the catheter tubular body, and the pod having a greater flexibility than the proximal portion of the catheter tubular body;

a deployer within the pod and attachable to the medical device and movable in a proximal to distal direction through the pod to move the medical device between a stored position within the pod and an in-use position externally of the pod; and

the deployer is movable to reveal the medical device,

wherein an outer diameter of the catheter tubular body is substantially constant from the proximal portion to the distal portion.

60. (new): A delivery system for transvascular deployment of a medical device, the system comprising:

a catheter comprising:

an elongate catheter tubular body having a proximal end and a distal end,

a tubular medical device embracing pod located at the distal end of the catheter tubular body for reception of the medical device, the pod being integrally formed with the catheter tubular body and including a thin-walled distal portion of the catheter tubular body of reduced wall thickness relative to a proximal portion of the catheter tubular body, and the pod having a greater flexibility than the proximal portion of the catheter tubular body, and

a deployer within the pod and attachable to the medical device and movable in a proximal to distal direction through the pod to move the medical device between a stored position within the pod and an in-use position externally of the pod, where the deployer is movable to reveal the medical device; and

an associated separate loading device which is operable to collapse the medical device from an expanded in-use position to a collapsed position for reception within the pod,

wherein an outer diameter of the catheter tubular body is substantially constant from the proximal portion to the distal portion.